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Hughes Electronics Corporation

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EXAMINER

RAMAN, USHA

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/837,844	Applicant(s) YAP ET AL.	
	Examiner Usha Raman	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21,23-76 and 78-109 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21,23-76 and 78-109 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 15th, 2006 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1 and 56 have been considered but are moot in view of the new ground(s) of rejection.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-21 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3-22 of copending Application No. 09/837,843. Although the conflicting claims are not

identical, they are not patentably distinct from each other because instant method claims 1-55 fall within the scope of method claims 1, 3-22 of the '843 application. Claim 1 of the '843 application recites the limitations "receiving the available content using at least two tuners", wherein the receiving of content using at least two tuners inherently anticipates the step of receiving of content using a single tuner (i.e. each of the two tuners is a single tuner) and therefore anticipates the scope of claim 1 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. Claims 23-55 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 24-56 of copending Application No. 09/837,843. Although the conflicting claims are not identical, they are not patentably distinct from each other because instant method claims 23-55 fall within the scope of method claims 24-56 of the '843 application. Claim 1 of the '843 application recites the limitations "receiving the available content using at least two tuners", wherein the receiving of content using at least two tuners inherently anticipates the step of receiving of content using a single tuner (i.e. each of the two tuners is a single tuner) and therefore anticipates the scope of claim 23 of the instant application. Furthermore, the limitations recited in claims 53 - 55 of the instant application necessitate the receiving of the available content using at least two tuners.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

6. Claims 56-76 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 57, 59-78 of copending Application No. 09/837,843. Although the conflicting claims are not identical, they are not patentably distinct from each other because instant apparatus claims 56-76 fall within the scope of apparatus claims 57, 59-78 of the '843 application. Claim 57 of the '843 application recites the limitations "at least two tuners for receiving the available content", wherein the receiving of content using at least two tuners inherently anticipates the step of receiving of content using a single tuner (i.e. each of the two tuners is a single tuner receiving content) and therefore anticipates the scope of apparatus claim 56 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Claims 78-109 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 80-111 of copending Application No. 09/837,843. Although the conflicting claims are not identical, they are not patentably distinct from each other because instant apparatus claims 78-109 fall within the scope of apparatus claims 80-111 of the '843 application. Claim 80 of the '843 application recites the limitations "at least two tuners for receiving the available content", wherein the receiving of content

using at least two tuners inherently anticipates the step of receiving of content using a single tuner (i.e. each of the two tuners is a single tuner receiving content) and therefore anticipates the scope of apparatus claim 78 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 23-29, 56, 78-84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vallone et al. (US Pat. 6,847,778) in view of Quintos (US Pat. 6,829,428).

In regards to claims 1 and 56, Vallone discloses a method of processing available content, comprising receiving the available content using a single tuner and performing at least one of a plurality of operations on the available content received from the single tuner, including recording a plurality of contents selectable for later viewing. See Vallone: column 4, lines 52-60, column 20, lines 24-30.

Vallone does not disclose that the plurality of operations includes selecting at least one recorded event from the available content based on a thumbnail, preview or snippet.

Quintos discloses a reproducing device for reproducing a plurality of recorded contents, wherein the device includes the step of selecting at least one recorded event from the available content based on a thumbnail. See abstract, column 1, lines 39-43 and column 2, lines 22-30. Quintos presents thumbnails of the plurality of recorded clips so that user is presented programs in an organized, intuitive fashion where ease of selection of the desired clip is possible.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Vallone in view of Quintos's teachings of displaying thumbnails of the recorded programs, thereby providing the viewer ease of identification and selection of program.

In regards to claims 23 and 78, Vallone discloses a method of processing available content comprising: receiving the available content using a single tuner, and performing at least one of a plurality of operations on the available content from the single tuner (see Vallone: column 4, lines 52-60, column 20, lines 24-30), wherein the performing step includes permitting a user to capture and store a snippet of digital audio/video from the available content (see Vallone: column 19, lines 40-47; Vallone discloses the step of recording a partial program and therefore a "snippet" of the digital audio/video from the available content).

In regards to claims 24 and 79, the snippet is saved to an external device.
See Vallone: column 15, lines 20-21, column 12, lines 54-58.

In regards to claims 25 and 80, the external device is a computer, high-density disk, or CDR. See Vallone: column 12, lines 54-58; wherein a DVD is a high-density disk.

In regards to claims 26 and 81, the digital audio/video from the available content (in MPEG format) is decoded (MPEG decoder 715). See Vallone: column 7, lines 33-35.

In regards to claims 27 and 82, the digital audio/video from the available content is encoded (MPEG encoder). See Vallone: column 6, lines 64-65.

In regards to claims 28 and 83, the digital audio/video is converted to analog data (see Vallone: column 4, lines 41-45; MPEG decoder decodes digital signal for producing an analog TV signal).

In regards to claim 29 and 84, wherein the external device is a VCR or other analog mass storage device. See Vallone: column 15, lines 20-21.

10. Claims 1-4, 6, 9, 12-14, 17, 56-59, 61, 64, 67-69, and 72, rejected under 35 U.S.C. 103(a) as being unpatentable over Hassell et al. (US Pre Grant Pub. 2002/0128685) in view of Quintos (US Pat. 6,829,428).

In regards to claims 1 and 56, Hassell discloses a method of processing available content, comprising: receiving the available content using a single tuner and performing at least one of a plurality of operations on the available content received from the single tuner. See Hassell: [0019], [0024].

Hassell does not disclose that the plurality of operations includes selecting at least one recorded event from the available content based on a thumbnail, preview or snippet.

Quintos discloses a reproducing device for reproducing a plurality of recorded contents, wherein the device includes the step of selecting at least one recorded event from the available content based on a thumbnail. See abstract, column 1, lines 39-43 and column 2, lines 22-30. Quintos presents thumbnails of the plurality of recorded clips so that user is presented programs in an organized, intuitive fashion where ease of selection of the desired clip is possible.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Wood in view of Quintos's teachings of displaying thumbnails of the recorded programs, thereby providing the viewer ease of identification and selection of program.

In regards to claim 2 and 57, the performing step includes selecting at least one recorded event from the available content, based on actor, actress, director, program title, key word, key phrase, tag information, synopsis, release date, critical review, related program, sequel, thumbnail, preview, or snippet. See Hassell: [0029], [0035], [0037].

In regards to claims 3 and 58, the selecting is initiated via remote control. See Hassell: [0025].

In regards to claims 4 and 59, the selecting is achieved by a user browsing through information related to the available content stored on at least one storage medium. See Hassell: [0037], [0040].

In regards to claims 6 and 61, the performing step includes tracking a list of recorded programs on the at least one storage medium for duplicates when a record operation is initiated. See Hassell: [0043]

In regards to claims 9 and 64, the performing step includes displaying characteristics of the selected program to record with a best match in the at least one storage medium for comparison by the user. See Hassell: [0043].

In regards to claims 12 and 67, Hassell discloses the step of activating an automatic preference for erasing recordings according to certain conditions for managing storage capacity. See [0094].

Examiner takes official notice that storage capacity can be managed by erasing duplicate (redundant) data.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system to automatically erase duplicate recordings, thereby managing storage capacity by deleting redundant data.

In regards to claims 13 and 68, Hassell discloses the step of displaying a status of a program from the available content the user is watching. See Hassell: [0056], [0057].

In regards to claims 14 and 69, the status may include a current delay, a status indicator, available record time, medium capacity, out-of-space alert, or attributes. See Hassell: [0056], [0057].

In regards to claims 17 and 72 the available record time indicates an amount of time available for recording. See Hassell: [0056].

11. Claims 1-2, 30-31, 38-47, 50, 53-57, 85-86, 93-96, 104, and 107-109 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al. (US Pre Grant Pub. 2002/0054752) in view of Quintos (US Pat. 6,829,428).

In regards to claims 1 and 56, Wood discloses a method of processing available content, comprising: receiving the available content using a single tuner (i.e. video input source); and performing at least one of a plurality of operations on the available content received from the single tuner. See Wood: abstract, [0032].

Wood does not disclose that the plurality of operations includes selecting at least one recorded event from the available content based on a thumbnail, preview or snippet.

Quintos discloses a reproducing device for reproducing a plurality of recorded contents, wherein the device includes the step of selecting at least one recorded event from the available content based on a thumbnail. See abstract, column 1, lines 39-43 and column 2, lines 22-30. Quintos presents thumbnails of the plurality of recorded clips so that user is presented programs in an organized, intuitive fashion where ease of selection of the desired clip is possible.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Wood in view of Quintos's teachings of displaying thumbnails of the recorded programs, thereby providing the viewer ease of identification and selection of program.

In regards to claim 2 and 57, the performing step includes selecting at least one recorded event from the available content, based on actor, actress, director, program title, key word, key phrase, tag information, synopsis, release date, critical review, related program, sequel, thumbnail, preview, or snippet. See Wood: [0040].

In regards to claims 30 and 85, the performing step includes permitting a user to rewind recording in an increment for playback of a portion of the available content (see Wood: [0031]).

In regards to claim 38 and 93, the system further comprises the steps of: creating a personalized database from the available content. See Wood: [0040] and [0064]

In regards to claim 39 and 94, the creating step includes:
Receiving an electronic program guide with available content (see Wood: abstract, [0026], [0035]);
Receiving preferences indicating potentially desired content (see Wood: [0028]);
Scanning the electronic program guide for the potentially desired content (see Wood: [0028], [0037]);

Recording the potentially desired content located by said scanning (see Wood: [0028]);

Aggregating a library of potentially desired content by iterating said scanning and recording steps (see Wood: [0039], [0051], and [0059]);

Creating a database, which catalogs the potentially desired content (see Wood: [0040], [0064]);

Selecting content from the database and permitting on-demand viewing of the selected content from the library of potentially desired content by a user (see Wood: [0040]).

In regards to claim 40, the system further comprises the steps of: determining a schedule of the potentially desired content; and resolving conflicts in the schedule; said recording step recording the potentially desired content according to the resolved schedule. See Wood: [0032], [0038], [0039], [0043].

In regards to claim 41, the system further comprises the step of: permitting a user to edit the library of potentially desired content. See Wood: [0056].

In regards to claim 42, the system further comprises the step of: permitting a user to organize the library of potentially desired content. See Wood: [0059]-[0060].

In regards to claim 43, the system further comprises the step of: permitting a user to add at least one comment to at least one portion of the library of potentially desired content. See Wood: [0060]

In regards to claim 44, the system further comprises the steps of: waiting until the potentially desired content is about to be broadcast (see Wood: [0037]), said recording step synchronizing the recording according to said waiting step (see Wood: [0038]).

In regards to claim 45, the inputting step includes inputting criteria indicating one or more potentially desired content. See Wood: [0042], [0043].

In regards to claim, 46, the inputting step includes determining potentially desired content selections based on previously selected content. See Wood: [0053]-[0054]

In regards to claim 47, the recording step is performed on at least one storage medium. See Wood: [0028], [0029].

In regards to claim 53 and 107, the potentially desired content includes a first content and a second content, wherein the method further comprises: simultaneously recording the first content and the second content. See Wood: [0037], [0038].

In regards to claim 54 and 108, the potentially desired content includes a first content, a second content and a third content, wherein the method further comprises: determining whether the recording of the first content has been completed; simultaneously recording the second and the third content. See Wood: [0032], [0037], [0038] and figure 2.

In regards to claim 55 and 109, the potentially desired content includes a first content and a second content, wherein method further comprises:

performing on demand play back of the first and/or second content simultaneous with the recording of the first and/or second content; and performing on demand play back of the second and/or third content simultaneous with the recording of the second and/or third content. See Wood: [0032], [0038].

In regards to claim 95, the apparatus further comprises: a display device operatively connected to said at least one storage medium, said display device receiving the played-back content from said at least one storage medium and displaying the played-back content (i.e. video output source 107 coupled to the video recorder device and storage medium (105). See Wood: [0032], [0029]).

In regards to claim 96, the apparatus comprises: receiving device and said control unit being provided in a unit (i.e. VDR and processor 101 in one unit see page 1 [0024]), said at least one storage medium external to the unit and operatively connected to the unit (i.e. output source coupled to another video data recorder, therefore external. See Wood: [0032].

In regards to claims 31 and 86, Wood does not disclose that the rewind increment corresponds to a duration a remote control button is depressed.

Examiner takes official notice that rewinding a recorded content in an increment corresponding to a duration a remote control button is depressed is well known in the art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Wood by rewinding a recorded content in

an increment corresponding to a duration a remote control button is depressed.

The motivation is to allow the user to easily control the rewind duration.

In regards to claim 50 and 104, Wood does not disclose the step of providing a synch pulse to confirm availability of the at least one storage medium.

Official notice is taken that polling is a well-known technique used for confirming the availability of devices (i.e. devices can be polled to see if they are active).

It would be obvious to one of ordinary skill in the art at the time of the invention to modify Wood by using polling ("synch pulse") to check storage device status for availability, in order to establish further communication with the device. The motivation is to ensure that the storage medium is active and available for data transfers.

12. Claims 5, 7-8, 10-11, 60, 62, 63, 65-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hassell et al. (US Pre Grant Pub. 2002/0128685) in view of Quintos (US Pat. 6,829,428) and further in view of Kanemitsu (US Pat. 6,854,127).

In regards to claims 5, 7, 60, and 62, the modified system of Hassell in view of Quintos discloses the step of checking for duplicates when attempting to record a program from available content that has already been recorded on the storage medium. See Hassell: [0043].

The modified system does not disclose the step of alerting a user when attempting to record a duplicate program.

Kanemitsu discloses the step of alerting to the user when an attempt to record a duplicate program. See column 1, lines 44-50, column 4, lines 1-5.

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the system of Hassell in view of Kanemitsu by alerting the user of duplicate recording status, in order to notify the user the status of an attempt to record the program.

In regards to claims 8 and 63, duplicates are checked if directory information matches (i.e. tag information). See Hassell: [0043]

In regards to claims 10 and 65, the modified system of Hassell in view of Quintos does not disclose that the performing step includes prompting the user with a notification and the option to view the possible match to confirm that the user is about to record a duplicate.

Kanemitsu discloses the step of prompting a user with notification of duplicate recording alert and the option to view the possible match to confirm that the user is about to record a duplicate. See Kanemitsu: column 10, lines 62-65, column 11, lines 24-28, lines 39-45, lines 48-51.

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the system by prompting the user of with a match duplicate recording to confirm that the user is about to record a duplicate. The motivation is to confirm the recording of a duplicate program thereby not wasting memory capacity.

In regards to claims 11 and 66, the modified system of Hassell in view of Quintos does not disclose that the performing step includes sending a notification after the match, asking the user if any or all portions of the duplicate episode should be erased.

Kanemitsu discloses the step of sending the notification after the match, asking the user if any or all portions of the duplicate episode should be erased (this is achieved by confirming the record of the duplicate program). See column 10, lines 62-65, column 11, lines 24-28, lines 39-45, lines 48-51 and column 12, lines 10-15.

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the system by notifying the user of duplicates and asking the user if any or all portion of a duplicate episode should be erased. The motivation is to confirm the overwriting of a current episode with the duplicate recording, thereby preventing wasting memory capacity.

13. Claims 15-16, 18-21, 34-37, 70-71, 73-76, 89-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hassell et al. (US Pre Grant Pub. 2002/0128685) in view of Quintos (US Pat. 6,829,428) and further in view of Vallone et al. (US Pat. 6,847,778).

In regards to claims 15 and 70, the modified system of Hassell in view of Quintos does not disclose the step of displaying a current delay that allows the user to see how far a recording is behind live feed when pausing a live signal.

Vallone discloses the step of recording a live program, wherein a trick play bar and cache bar are overlaid and indicate the visual reference points indicating where the live recording is at (cache bar) and where the current slider is at when the user pauses live signal. See figure 26 and description in column 18, lines 39-44, lines 55-61, and column 19, lines 60-65.

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the system in view of Vallone by displaying a current delay that allows the user to see how far a recording is behind live feed when pausing a live signal. The motivation is to give the user a visual reference point on the current viewing location of the program.

In regards to claims 16 and 71, the modified system of Hassell in view of Quintos does not disclose the step of status indicator indicating whether the content a user is watching is live or recorded.

Vallone discloses the step of indicating visually to a user whether the content a user is watching is live or recorded through a mode indicator. See column 19, lines 54-55.

It would have been obvious to one of ordinary skill in the art at the time to further modify the system by indicating whether a content user is watching is live or recorded. The motivation is to indicate visually to the user the type of content a user is watching.

In regards to claim 18 and 73, the modified system of Hassell in view of Quintos does not disclose the step of clearing paused programming from the

available content or converting the paused programming to recorded programming during a channel change.

Vallone discloses the step of discarding data on buffers (containing paused programming) upon channel change. See Vallone: column 9, lines 2-9.

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the system of Hassell, by clearing the paused programming from the available content during a channel change. The motivation is to purge data from buffers, thereby enabling the capture of new data from a changed channel on the buffer.

In regards to claims 19 and 74, the modified system does not comprise the step of prompting a user near an end of a pause time window whether permanent recording is desired.

Examiner takes official notice that it is well known to prompt the user for storing data prior to purging data from buffer, allowing the user to store the data if needed.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system by prompting the user whether permanent recording is desired thereby giving the user an opportunity to store the data from buffer prior to channel change.

In regards to claims 20 and 75, the paused programming and permanent programming is stored in different portions of at least one storage medium,

wherein the paused programming is stored in a buffer/cache of the storage medium. See Vallone: column 9, lines 44-48, 61-67 and column 10, lines 1-3.

In regards to claims 21 and 76, the modified system implements a circular buffers with pointers for capturing events and does not disclose that a portion of the at least one storage medium reserved for paused programming is variable.

Examiner takes official notice that it is well known to allocate memory dynamically using pointers.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system by dynamically allocating buffers using pointers, thus creating a "variable" buffer. The motivation is to create a variable buffer for storing a variable sized programming.

In regards to claims 34 and 89, the modified system of Hassell in view of Quintos does not disclose that the performing step includes enabling a user to jump back from a live broadcast to a last paused video segment.

Vallone discloses the step of enabling a user to jump back from a live broadcast to a last paused video segment (via bookmarks). See Vallone: column 15, lines 34-43.

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the system in view of Vallone, by creating bookmarks thereby allowing a viewer to jump back to a last paused video segment. The motivation is to allow the user to continue watching the video where it was last stopped.

In regards to claims 35 and 90, the jump back is triggered by a remote control. See Vallone: column 15, lines 57-62.

In regards to claims 36 and 91, after resuming a live broadcast from a paused program, the jump back is back to a last paused point (i.e. last stopped point). See Vallone: column 15, lines 34-43.

In regards to claims 37 and 92, after the jump back, the paused program is played back from the last pause point. See Vallone: column 15, lines 34-43.

14. Claims 32-33, 87-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al. (US Pre Grant Pub. 2002/0054752) in view of Quintos (US Pat. 6,829,428) and further in view of Lewis (US Pre Grant Pub. 2005/0198677).

In regards to claims 32, 33 and 87 and 88, the modified system of Wood in view of Quintos does not comprise a loop established so that the instant replay is played repeatedly until stopped by a user.

Lewis discloses the step of implementing instant replay in continuous loop so that the instant replay is played repeatedly until stopped by a user. See Lewis: [0229] and [0230].

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the system in view of Lewis' teachings by implementing a continuous loop so that the instant replay is played repeatedly until stopped by the user. The motivation is to allow the user to replay a time frame of a video regardless of how long a user has recorded a program.

In further regards to claims 33 and 88, the modified comprises the step of establishing instant replay loops however does not comprise a loop established so that the instant replay is played repeatedly until a certain number of loops have been completed.

Examiner takes official notice that it is well known to implement a loop into a finite loop that can be terminated after the iterations of certain number of loops.

It would have been obvious to one of ordinary skill in the art at the time of the invention to change the instant replay loop to a finite loop that can be terminated after certain number of loops have been completed. The motivation is to resume normal playback after the certain number of loops of instant replay have been played.

15. Claims 48, 51, 97-102, 105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al. (US Pre Grant Pub. 2002/0054752) in view of Quintos (US Pat. 6,829,428) and further in view of Gudesen (US Pat. 5,761,607).

In regards to claim 48 and 102, the modified system of Wood in view of Quintos does not disclose that the storage medium is reconfigurable.

Gudesen discloses a personal video recording system, comprising mass storage at the user site, where the storage is expandable (using one or more storage medium), removable, replaceable storage media, and therefore reconfigurable. See column 4 lines 54-58, column 6 lines 20-27.

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the video recording system of Wood in view of

Gudesen's teaching by incorporating reconfigurable storage system that permits storage media to be added, removed, replaced, etc. The motivation is to provide easy scalability for increasing the storage capacity.

In regards to claims 51, 97, 98, and 105, the modified system of Wood in view of Quintos does not disclose that the storage medium is expandable.

Gudesen discloses a personal video recording system, comprising mass storage at the user site, where the storage is expandable (using one or more storage medium), removable, and replaceable storage media, thereby accommodating a larger video library. See column 4 lines 29-33, lines 54-58, column 6 lines 20-27.

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the system of Wood in view of Gudesen's teaching by incorporating an expandable storage system in order to provide easy scalability for increasing the storage capacity.

In further regards to claim 98, since the storage device is removable, replaceable and expandable, the storage device is modular.

In regards to claim 99 and 100, the modified system of Wood in view of Quintos discloses decompressing (decoding) compressed (encoded) video prior to playback (see page 2 [0033], page 3 [0040]). Wood does not disclose that content can be encrypted.

Gudesen discloses a personal video recording system where the storage media, comprising encoder means for encrypting content prior to stored (see

column 4, lines 34-40), and decoder means for decrypting video for playback (see column 4, lines 63-67).

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the system of Wood in view of Gudesen by providing encryption means for encrypting data and decryption means for decrypting the encrypted data. The motivation is to provide a fraud prevention mechanism for preventing unauthorized access of data.

In further regards to claim 100, the content feed supplies content in an encrypted form (i.e. receiving data in encoded/encrypted form) and stores the desired content in the encrypted form (i.e. storing encoded data in disk. See Gudesen: column 6, lines 47-54). A switching device is operatively connected to said receiving device, said at least one storage medium and said control unit (i.e. internal traffic controller (206) operatively coupled to storage (201), receiving device (204) and control unit (CPU). See column 4, lines 22-25, and fig. 1b); a decryption unit operatively connected to said switching device and to said at least one storage medium, said decryption unit decrypting the desired programs supplied from said at least one storage medium (see Gudesen, column 4 lines 33-40 and fig. 1b); control device controls said switching device to route the encrypted content to either said at least one storage medium or to said decryption unit (i.e. internal traffic controller routes encrypted data from storage to decryption (decoder) for playback. See Gudesen: column 4, lines 63-67).

In regards to claim 101, the electronic program guide includes a port (107) that receives program guide information. See Wood: [0026].

16. Claims 49, 103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood (US Pre Grant Pub. 2002/0054752) in view of Quintos (US Pat. 6,829,428) and further in view of Halford (US Pat. 5,283,791).

In regards to claim 49 and 103, the modified system of Wood in view of Quintos does not disclose the step of synchronizing access of the at least one storage medium to avoid periods of inaccessibility.

Halford teaches a method of synchronizing access to storage medium in a disk array, in order to ensure that failure of any one storage device does not interrupt the operation of storage and retrieval, thus providing a highly fault tolerant storage device. See column 6, lines 18-25.

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the system of Wood in view of Halford by synchronizing disk access in order to provide fault tolerance by guaranteeing disk availability for storage and retrieval, even in case of a disk failure.

17. Claims 52, 106 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood (US Pre Grant Pub. 2002/0054752) in view of Quintos (US Pat. 6,829,428) and further in view of Hassell et al. (US Pre Grant Pub. 2004/0128658).

In regards to claims 52 and 106, the modified system does not disclose that the at least one storage medium is automatically loaded.

Hassell teaches video playback system where when a user selects a program that is not on the current disk then the system automatically loads the disk containing the program, thereby providing 'juke-box' functionality. See page 8 [0089].

It would have been obvious to one of ordinary skill in the art to modify the system with Hassell's teachings of automatically loading a storage medium in order to retrieve a requested data. The motivation is to allow the system to automatically determine the storage medium that a requested data is on and load it for playback, thus alleviating the user from the burden of searching and loading.

Conclusion


18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usha Raman whose telephone number is (571) 272-7380. The examiner can normally be reached on Mon-Fri: 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2623

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